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EXAMINER

SALCE, JASON P

ART UNIT

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2421

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,153	Applicant(s) LEE, HENRI	
	Examiner Jason P. Salce	Art Unit 2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 7/7/2008 have been fully considered but they are not persuasive.

Applicant notes that conventional twisted pair networks (having four pairs of twisted wires) are used to connect sources to the central unit MDS and receiver to the central unit MDS. Applicant further states that one aspect of the invention teaches that a first pair is a service pair PS for the source signals and the control signals to the MDS and the second pair is a distribution pair PD for the processed signals from the MDS to the receivers.

Applicant argues in Figure 5 of Goodman that the UTP network 500 does not directly connect the sources to the main information interface 200 and does not directly connect the remote control to the interface 200. Applicant further notes that on the other side, the unit UTP network does not directly connect the interface 200 to the receivers.

The examiner agrees that Goodman teaches these features, however the previously presented claims are broad and have not been written to overcome the differences between Goodman and the claims of the instant application. The examiner notes that the claims only recite a central processing and multiplexing unit, characterized in that it comprises a twisted pairs service network and a twisted pairs distribution network, which does not teach away from the network topologies found in

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figures of Goodman. Note that the two "networks" comprised by the MDS as claimed, do not recite a specific structure in regards to how the networks are connected (**directly**) to the MDS. Therefore, even though Goodman teaches a UTP network 250 in Figure 2 transmitting different kinds of signals from the sources collected in main information interface 200 and transmitted over UTP connections (**further note UTP connections 121, 802, 804 and 806 in Figures 8-11**) to UTP network 250 and then transmitting these signals to receivers over a UTP connection (**see UTP connections 810 in Figures 8-11**) from UTP network 250 to devices 134,144 and 154, the examiner notes that this clearly teaches a twisted pairs service network for routing audio/video signals derived from sources to the central processing and multiplexing unit (**UTP connections 121, 802, 804 and 806 in Figures 8-11**) and a twisted pairs distribution network (**UTP connections 810 in Figures 8-11**) to carry the processed and multiplexed audio/video signals output from the processing and multiplexing unit to the receivers.

Applicant further argues that Goodman does not teach or suggest dividing the existing twisted pairs network into two different and distinct sub-networks for routing different and distinct kinds of signals, these signals being divided in "upward" signals routed to the MDS and downward signals routed from the MDS to the receivers. The Applicant further notes that this "splitting" Of the global existing network is simply not disclosed or suggested in Goodman.

As clarified by Applicant, the claimed twisted pair "networks" are the same twisted pair cable with four pairs of twisted wires to route "upward" signals to the MDS and "downward" signals from the MDS to receivers. As stated above, no such claim limitation existed in the original claims, however, even if the original claims required these limitations, Goodman clearly teaches dividing the existing twisted pairs network into two (**or more**) sub-networks at Column 13, Line 11 through Column 18, Line 4 and Figures 11-16 for disclosing multiple ways of dividing the received signals from sources 121, 802, 804 and 806 into multiple pairs of UTP 810.

However, as disclosed in newly added claim 16, Applicant has clearly recited that the twisted pairs network comprises four pairs of twisted wires and that the service pair routes source signals and control signals to the central processing and multiplexing unit. This is further described by Applicant's specification (**Pages 10-11**) where a user can view a movie on a VCR in another room of the user's house and the signal transmitted from the VCR to the room the user is currently watching television through the MDS.

The examiner notes that although Goodman teaches that a UTP network has four pairs of twisted wires (**see Figure 16 and Column 17, Line 32 through Column 18, Line 4**), Goodman fails to specifically teach which signals are transmitted over the different pairs of the twisted pairs network and sending a "source signal" back to the central processing and multiplexing unit, which would allow a viewer sitting in a first room to watch a television program recorded on a VCR in a second room.

In order to reject newly added claim 16, the examiner has applied the Fenouil reference to the teachings of Goodman, which further details sending source signals from one client device to another client device through a central processing and multiplexing unit (**see rejection below**).

The examiner further notes that in regards to claims 5-6 and 12, the examiner had previously assumed that connection 1092 in Figure 10 was a coaxial connection, however Goodman fails to describe connection 1092 is a coaxial connection in the specification, therefore the examiner takes Official Notice that coaxial cables are used to connect set-top boxes to televisions.

Drawings

The drawings were received on 7/7/2008. These drawings are acceptable.

Claim Objections

Claim 16 is objected to because of the following informalities: Claim 16 states the identifier "original", however claim 16 is a "new" claim. Appropriate correction is required by providing the identifier "previously presented" or equivalent in subsequent Office Action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7-11 and 13-15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Goodman (U.S. Patent No. 6,192,939).

Referring to claim 1, Goodman discloses a system for distribution of audio/video signals (**see Figure 2 and Column 4, Line 66 through Column 5, Line 12 for distributing television signals over the UTP network**) comprising audio/video signal sources (**see Figure 30a and Column 29, Line 35 through Column 20, Line 5 and video source 820 in Figure 9 for the system containing multiple video sources**) and audio/video signal receivers (**see televisions 154 in Figure 2**).

Goodman also discloses that the system comprises a central processing and multiplexing unit (**see main information interface 200 in Figure 2 and voice, data and video hub 800 in Figures 9-11 and Column 10, Lines 52-54 for the main information interface 200 multiplexing the telephone, computer and television signals for distribution over UTP wiring network**).

Goodman also discloses that the system comprises a twisted pair service network (**UTP 806 in Figures 9-11**) for routing audio/video signals derived from sources to the central processing and multiplexing unit (**see Figure 5 for an intermediate UTP**

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network and further note Column 11, Lines 33-39 for UTP 806 in Figures 9-11 transmitting audio/video signals derived from sources selected in video source 820 to the processing and multiplexing unit 900) and a twisted pair distribution network (see UTP 810 in Figures 9-11) to carry the processed and multiplexed audio/video signals output from the processing and multiplexing unit to the receivers (see UNIT UTP networks 400 in Figure 5 and Column 13, Lines Y41-49 for UTP 810 in Figures 9-11 transmitting the processed and multiplexed signals to jacks 300 in Figure 3, which in turn distribute the multiplexed and processed signals to the computer, television and telephone devices).

Referring to claim 2, Goodman also discloses a means of inputting control signals that can be routed on the service network (**see remote control 834 in Figure 8 and Column 12, Lines 20-40 for sending a control signal from remote control 834 to video converter 920, wherein the control signal transmitted from the remote control must be transmitting over UTP 810 in Figures 9-11).**

Referring to claim 3, Goodman also discloses connection means on which signal sources can be connected to send signals and to receive control signals that can be routed on the service network (**see wiring block 805 in Figure 8 and Column 12, Lines 20-40 for sending a control signal from remote control 834 to video converter 920, wherein the control signal transmitted from the remote control must be transmitting over UTP 810 (*through wiring block 805*) in Figures 8-11).**

Referring to claim 4, Goodman also discloses including input modulators associated with corresponding connection means to modulate signals to be routed on the service network (**see control modulator 1060 for set-top box 832, where multiple set top box exist in the system (see Figures 8 and 10) and video modulator 1034 in Figure 10 for modulating signals to be routed on both UTP networks 806 and 810**). The examiner notes that since the input modulators transmit and receive signals through hub 800 and wiring block 805 in Figure 8 that the input modulators are associated with corresponding connection means (*wiring block 805 in Figure 8*)).

Referring to claim 7, Goodman also discloses multiplexing means to multiplex control signals on the service network and to multiplex the modulated TV signals on the distribution network (**see Column 7, Line 63 through Column 8, Line 26 and Column 10, Lines 50-54 for multiplexing signals onto the UTP network 250, Column 12, Lines 34-47 for sending (and combining through wiring block 805 and connection 807) control signals (video selections) through UTP network/service network 806 and Column 12, Lines 48-55 for distributing the requested video signals over UTP 810 in Figure 10**)).

Referring to claim 8, Goodman also discloses a processing unit to process the multiplexed modulated signals output from the service network so as to route them on

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the distribution network (**see Hub 800 in Figure 8 and Column 12, Lines 41-55 for distributing multiplexed modulated television signals over UTP 806 and 810 to set top boxes 832 in Figures 9-10).**

Referring to claim 9, Goodman also discloses processing means for individually processing the modulated signals output from the service network before routing them to multiplexing means (**see media converter components 1012a for processing the data, video and voice signals received over service network 121, 802, 804, and 806 before combining the signals by the multiplexing the signals for distribution over UTP distribution network 810 in Figures 8-12).**

Referring to claim 10, Goodman also discloses multiplexing means to multiplex the control signals output from the service network to reinject them onto the service network (**see wiring block 805 for accepting multiple signals from remote controls 834 and combining the remote control signals into a single output 807 back to hub 800 in Figure 8).**

Referring to claim 11, Goodman also discloses that the control signal input means includes a wave receiver associated with a remote control (**see remote control 834 in Figure 8 and IR receiver 1062 in Figure 10 for transmitting an IR signal from a remote control).**

Referring to claim 13, Goodman also discloses that the distribution network and the service network are formed from a single previously installed network of cables consisting of twisted wire pairs (**see Column 4, Lines 8-15 and Figure 2**).

Referring to claim 14, Goodman also discloses that the multiplexing means are also connected to external video signal sources processed later in the processing unit so that they can be transferred onto the distribution network (**see main information interface 200 and television distribution system that sends signals to video source 820 in Figure 8 and video source suites 3014 connected to video source controller 3010 and NxM switch 3012 in Figure 30a**).

Referring to claim 15, Goodman also discloses that the external sources include antennas and/or satellite terminals (**see Column 30, Lines 15-18**).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman (U.S. Patent No. 6,192,399).

Referring to claim 5, Goodman also discloses cable terminals (**see set top boxes in Figure 8**) on which a coaxial cable leading to a TV receiver can be connected (**see the connection 1092 from set-top box 832 to television 154 in Figure 10 for a set-top terminal connected to a television which can allow a TV receiver to be connected via a coaxial cable**).

Goodman fails to teach that the terminals connecting TV to the set-top box are coaxial cable terminals.

The examiner takes Official Notice to the fact that coaxial cable can connect a television to a set top box device.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the connection 1092 connecting a set-top box to a television in Figure 10 of Goodman, using a coaxial cable, as taught by the examiner's Official Notice, for the purpose of using pre-existing and commonly used terminals already installed in a set-top box and a television.

Referring to claim 6, Goodman also discloses adapters associated with terminals to adapt a processed signal output from the distribution network to be routed on a coaxial cable (**see HPF, video demodulator and NTSC modulator in set top box 832 in Figure 8 which allows a signal to be processed and distributed on a coaxial cable connected from a set-top box to a television**).

Goodman fails to teach that the terminals connecting TV to the set-top box are coaxial cable terminals.

The examiner takes Official Notice to the fact that coaxial cable can connect a television to a set top box device.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the connection 1092 connecting a set-top box to a television in Figure 10 of Goodman, using a coaxial cable, as taught by the examiner's Official Notice, for the purpose of using pre-existing and commonly used terminals already installed in a set-top box and a television.

Referring to claim 12, Goodman also discloses a box that includes input modulators associated with corresponding connection means to modulate signals output from sources (**see control modulator 1060 for set-top box 832, where multiple set top box exist in the system (see Figures 8 and 10) and video modulator 1034 in Figure 10 for modulating signals to be routed on both UTP networks 806 and 810**). The examiner notes that since the input modulators transmit and receive signals through hub 800 and wiring block 805 in Figure 8 that the input modulators are associated with corresponding connection means (**wiring block 805 in Figure 8**)), output adapters associated with corresponding terminals to adapt the signal output from the distribution network (**see HPF, video demodulator and NTSC modulator in set top box 832 in Figure 8 which allows a signal to be processed and distributed on a coaxial cable connected from a set-top box to a television**), means of inputting control signals that can be routed on the service network (**see remote control 834 in Figure 8 and Column 12, Lines 20-40 for**

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sending a control signal from remote control 834 to video converter 920, wherein the control signal transmitted from the remote control must be transmitting over UTP 810 in Figures 9-11), connection means onto which signal sources can be connected to send video signals) and to received control signals on the service network (see wiring block 805 in Figure 8 and Column 12, Lines 20-40 for sending a control signal from remote control 834 to video converter 920, wherein the control signal transmitted from the remote control must be transmitting over UTP 810 (through wiring block 805) in Figures 8-11), cable terminals (see set top boxes in Figure 8) to which a coaxial cable connecting to a TV receiver can be connected (see the connection 1092 from set-top box 832 to television 154 in Figure 10 for a set-top terminal connected to a television which can allow a TV receiver to be connected via a coaxial cable) and means of connection to the distribution network and the service network (see HPF 1064 and control modulator 1060 in Figure 10 and Hub 800 in Figure 8).

Goodman fails to teach that the terminals connecting TV to the set-top box are coaxial cable terminals.

The examiner takes Official Notice to the fact that coaxial cable can connect a television to a set top box device.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the connection 1092 connecting a set-top box to a television in Figure 10 of Goodman, using a coaxial cable, as taught by the examiner's

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Official Notice, for the purpose of using pre-existing and commonly used terminals already installed in a set-top box and a television.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman (U.S. Patent No. 6,192,399) in view of Fenouil (U.S. Patent No. 6,240,554).

Referring to claim 16, Goodman discloses video signal sources (**see Figure 9 and Column 11, Lines 4-16 for hub 800 receiving a plurality of television signals (sources) from video source 820**).

Goodman also discloses video signal receivers (**see televisions 154 in Figures 2-3**).

Goodman also discloses a central processing and multiplexing unit (**see Figure 9 and Column 10, Lines 66 through Column 11, Line 39 for hub 800 processing and multiplexing signals**).

Goodman also discloses a twisted pairs network comprising four pairs of twisted wires (**see Figure 16 and Column 17, Lines 32 through Column 18, Line 4 for the system of Goodman using a 100BaseT4 device to process signals from four UTP/pairs of wires**). The examiner is aware that only three of the UTP/pairs of wires are used by the 100BaseT4 device to transmit data, however if only three of the four pairs of twisted wires are used to transmit signals, this does not exclude that the entire twisted pairs network comprise four pairs of twisted wires, which is clearly taught by Goodman above.

Goodman fails to teach that one pair of the twisted pairs network is a service pair that routes source signals and control signals to the central processing and multiplexing unit and that a different pair of the twisted pairs network is a distribution pair that routes processed signals from the processing and multiplexing unit to the receivers.

Fenouil also discloses a twisted pairs network comprising four pairs of twisted wires (**see Column 8, Line 66 through Column 9, Line 8 for transmitting and receiving audio, video and data signals over a twisted pairs network comprising eight pins/four pairs**), wherein one pair of the twisted pairs network is a service pair that routes source signals and control signals to the central processing and multiplexing unit (**see Figure 4 and Column 8, Lines 66 through Column 9, Line 8 for transmitting audio source signals and control signals on pins 1 and 2 of the (four pair) twisted pair network to hub 100 in Figure 4 and therefore clearly teaches a service pair that routes/transmits source (audio) and control signals to the hub 100/central processing and multiplexing device**) and that a different pair of the twisted pairs network is a distribution pair that routes processed signals from the processing and multiplexing unit to the receivers (**see Figure 4 and Column 8, Line 66 through Column 9, Line 8 for receiving the processed audio and control signals (see Column 10, Line 47 through Column 11, Line 17 for processing a video signal before transmission) from hub 100 on pins 3 and 6 of the (four pair) twisted pair network and therefore clearly teaches a different pair used for distributing processed signals from the hub 100/processing and multiplexing unit**).

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At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the twisted pairs network, as taught by Goodman, using the routing functionality that allows source signals to be transmitted back to a central processing and multiplexing unit, as taught by Fenouil, for the purpose of providing a bi-directional transmission of video bandwidth signals which is very versatile while also being very cost effective (**see Column 1, Lines 64-67 of Fenouil**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P. Salce whose telephone number is (571) 272-7301. The examiner can normally be reached on M-F 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason P Salce/
Primary Examiner, Art Unit 2421

Jason P Salce
Primary Examiner
Art Unit 2421

October 16, 2008